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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,877	11/05/2001	Hakan Ozdemir	99-S-190 (1678-22-1)	8286
30431	7590	11/04/2004	EXAMINER	
STMICROELECTRONICS, INC.			RODRIGUEZ, GLENDA P	
MAIL STATION 2346			ART UNIT	
1310 ELECTRONICS DRIVE			PAPER NUMBER	
CARROLLTON, TX 75006			2651	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,877

Applicant(s)

OZDEMIR, HAKAN

Examiner

Glenda P. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Examiner acknowledges the deferral made by the Applicant until the action is made unprovisional in according with MPEP §822.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuttle (US Patent No. 6, 108,151) in view of Reddy et al. (US Patent No. 6, 295, 176).

Regarding Claims 1 and 32, Tuttle et al. teach a storage disk, comprising:

A disk sector having a beginning and operable to store data (Fig. 2B and Col. 4, Lines 23-41);

And a servo wedge located at the beginning of the sector and operable to identify the sector in conjunction with an initial positioning of a read-write head and a read of the data from or write of the data to the disk sector (Col. 7, Lines 24-65.

Tuttle et al. teaches the use of a servo address mark in order to quickly detect the starting position of the head with respect to the disc).

However, Tuttle et al. does not explicitly teach wherein the servo wedge lacks a zero-frequency field. Reddy et al. teaches a header-less servo wedge, which lacks a zero-frequency field used for detection of the sector being detected by the read/write head (Reddy et al. uses spokes in the servo sectors which are used by the head to identify the position with respect to the disk. See

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Col. 7, L. 1-10, Col. 8, L. 3-26 and Col. 9, L. 35-48). It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify Tuttle et al.'s invention with the teaching of Reddy et al. in order to manage the tracks in the disk (See Abstract of Reddy et al.).

Regarding Claim 2, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claim 1. The combination further teach wherein the sector includes a track that is operable to store the data (Fig. 2B and Col. 4, Lines 23-41); And the servo wedge is operable to identify the track during an initial positioning of a read-write head and during a subsequent read of the data from or write of the data to the track (Col. 7, Lines 24-65. Tuttle et al. teaches the use of a servo address mark in order to quickly detect the starting position of the head with respect to the disc).

Regarding Claim 3, Tuttle et al. teach a storage disk, comprising:

Data sectors (Pat. No. 6, 108, 151; Fig. 2A);

Servo wedges each detectable by a read head upon initial spin-up and identifying a respective data sector (Pat. No. 6, 108, 151; Col. 4, Lines 29-47);

However, Tuttle et al. fail to teach wherein the servo sector has no spin-up wedges. Reddy et al. teaches a headerless servo wedge, which lacks a zero-frequency field (i.e. spin-up wedge) used for detection of the sector being detected by the read/write head (Reddy et al. uses spokes in the servo sectors which are used by the head to identify the position with respect to the disk. See Col. 7, L. 1-10, Col. 8, L. 3-26 and Col. 9, L. 35-48). It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify Tuttle et al.'s invention

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with the teaching of Reddy et al. in order to manage the tracks in the disk (See Abstract of Reddy et al.).

Apparatus claim 5 and 25 are drawn to the apparatus corresponding to the method of using same as claimed in claim 3. Therefore apparatus claim 5 and 25 correspond to method claim 3, and are rejected for the same reasons of obviousness as used above.

Method claim 29 is drawn to the method of using the corresponding apparatus claimed in claim 1. Therefore method claim 29 corresponds to apparatus claim 1 and is rejected for the same reasons of obviousness as used above.

Claim 8 has limitations similar to those treated in the above rejections, and are met by the references as discussed above. Claim 8 however also recites the following limitations..."disk sectors operable to store data (Fig. 2B and Col. 4, Lines 23-41 of Tuttle et al.), Servo wedges located in the disk sectors and having respective location identifiers, position bursts, and other portions, the other portions of each servo wedge substantially the same as the other portions of all the other servo wedges (Col. 4, Lines 23-50) and no servo wedge having other portions that are significantly different than the respective other portions of the other servo wedges (Col. 7, L. 1-10, Col. 8, L. 3-26 and Col. 9, L. 35-48. Reddy et al. teach a header-less servo wedge which uses no identification fields in order to identify the position of the head with respect to the track. See also Fig. 10).

Regarding Claims 4 and 6, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claims 3 and 5, respectively. The combination et al. further teaches wherein the

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data sectors comprise tracks (Pat. No. 6, 108, 151; Col. 4, Lines 29-47); and each servo wedge identifies and is located in a respective track (Col. 4, L. 29-47 of Tuttle et al.).

Regarding Claim 9, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claim 8. The combination further teaches wherein the other portions of each servo wedge include a preamble (Col. 4, Lines 23-41 of Tuttle et al.).

Regarding Claim 10, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claim 8. The combination further teaches wherein the others portions of each servo wedge include a servo synchronization mark (Col. 4, Lines 23-41 of Tuttle et al.).

Regarding Claim 11, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claim 8. The combination further teaches wherein the others portions of each servo wedge include a servo address mark (Col. 4, Lines 23-41 of Tuttle et al.).

Regarding Claim 12, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claim 8. The combination further teaches wherein the location identifier of each servo wedge is different from the location identifier of another servo wedge (Col. 4, Lines 23-41 of Tuttle et al.).

Regarding Claim 13, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claim 8. The combination further teaches wherein the position bursts of each servo wedge are different from the position bursts of another servo wedge (Col. 4, Lines 23-50 of Tuttle et al.).

Claims 14 and 20 have limitations similar to those treated in the above rejections, and are met by the references as discussed above. Claims 14 and 20 however also recites the following limitations..." A motor coupled to and operable to rotate the disk (It is known that the disk is

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rotated by a motor or spindle); A read head operable to generate a read signal that represents the servo data and having a position with respect to the surface of the data-storage disk (Col. 5, Lines 49-61 of Tuttle et al.); A read-head positioning circuit operable to move the read head over the surface of the disk (Col. 4, Lines 13-16 of Tuttle et al.); And a processor wherein it detects of the preamble of the servo wedges without first detecting a spin up wedge (Col. 4, Lines 29-56 of Tuttle et al.); And a servo circuit coupled to the read head and to the read-head positioning system (Col. 14, Lines 13-28 of Tuttle et al.) and a servo circuit including a servo channel with a processor coupled to the servo channel (Fig. 11, of Reddy et al.)”.

Regarding Claims 15, 16, 17, 21, 22 and 23, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claim 14 and 20, respectively. The combination further teach wherein the servo channel is operable to recover the servo data from the detected servo wedge; and determine the positional information of the read head from the recovered servo data, and provide its initial position to the read-head positioning circuit (Col. 9, L. 35-Col. 10, L. 7 of Reddy et al. Reddy et al. teach the servo circuit retrieving from the servo data it can then identify the position wherein the head is located.).

Regarding Claim 18 and 24, the combination of Tuttle and Reddy teaches all the limitations of Claim 14 and 20, respectively. The combination further teaches wherein the read-head position circuit and the servo circuit are unable to determine the position of the read-head before the first servo wedge is detected (L. 35-Col. 10, L. 7 of Reddy et al., wherein it teaches its technique to detect the location of the head with respect to the disk. It would have been obvious to a person of ordinary skill in the art to know that unless the first servo spoke from the servo wedge is not detected, then the apparatus would not be able to locate its position.).

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Regarding Claim 19, the combination of Tuttle and Reddy teaches all the limitations of Claim 14 and 20, respectively. The combination further teaches wherein the read head comprises a read/write head (Col. 7, L. 50-60 of Reddy et al.).

Regarding Claim 26, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claim 25. The combination further teach wherein the wherein writing the servo wedge comprises writing the servo wedge at the beginning of the disk sector (Col. 4, Lines 29-47 of Tuttle et al.).

Regarding Claim 27, Tuttle et al. and Reddy et al. teach all the limitations of Claim 25. The combination further teach wherein writing the servo wedges comprises writing the servo wedge in a track of the disk sector, the servo data operable to identify the track during an initial positioning of the head and during a read of file data from or write of file data to the track (Col. 4, Lines 29-47 of Tuttle et al.).

Regarding Claim 7 and 28, the combination of Tuttle et al. and Reddy et al. teach all the limitations of Claims 5 and 25, respectively. The combination further teaches wherein the pre-synchronization mark lack erase fields (Reddy et al. teaches a header-less servo wedge, which lacks a pre-synchronizing field used for detection of the sector being detected by the read/write head See Col. 7, L. 1-10, Col. 8, L. 3-26 and Col. 9, L. 35-48 and Fig. 10).

Regarding Claim 30, the combination of Tuttle and Reddy et al. teach all the limitations of Claim 29. The combination further teaches wherein the second servo data is operable to identify the second disk sector during the initial positioning of the head over the disk (Col. 4, Lines 23-50 of Tuttle et al.. Tuttle et al. teach that a plurality of sectors have an identification area in the servo data.).

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Regarding Claim 31, the combination of Tuttle and Reddy et al. teach all the limitations of Claim 29. The combination further teaches wherein the second servo data is unable to identify the second disk sector during the initial positioning of the head over the disk (Col. 4, Lines 23-50 of Tuttle et al.).

Response to Arguments

Applicant's arguments with respect to claims 1-13 and 29-32 have been considered but are moot in view of the new ground(s) of rejection due to the newly amended Claims 1-13 and 29-32.

Applicant's arguments with respect to claim 14-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenda P. Rodriguez whose telephone number is (703) 305-8411. The examiner can normally be reached on Monday thru Thursday: 7:00-5:00; alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (703) 305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



**SINH TRAN
PRIMARY EXAMINER**

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'gpr', is written above the date.

gpr
October 29, 2004.